IS : 5628 - 1970
Reaffirmed 2012
(Reaffirmed 2017)

Indian Standard

SPECIFICATION FOR
CAST DECK-END ROLLERS

UDC 629.12.015.65

भारतीय मानक ब्यूरो
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Alterations

(*Page* 4, *clause* **3.1**, *informal table, last column, against* ' Set Screw

a) Substitute ' IS : 4a855 - 1968†† ' *for* 'IS : 2517 - 1963†† '

b) *Foot-note with († †) mark* — Substitute the following for the existing foot-note:

' ††Specification for bright steet bars for machine ???.'

(MCPD 1)

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Indian Standard
SPECIFICATION FOR CAST DECK-END ROLLERS

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(*Continued on page* 2)

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(*Continued from page* 1)

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Indian Standard

SPECIFICATION FOR CAST DECK-END ROLLERS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 27 May 1970, after the draft finalized by the Shipbuilding Sectional Committee had been approved by the Mechanical Engineering Division Council.

0.2 Deck-end rollers are used on board ships for guiding the ropes while mooring the ship or during boat-launching and such other ship handling purposes.

0.3 In the preparation of this standard, assistance has been derived from JIS F 2003 'Deck-end rollers' issued by Japanese Industrial Standards Committee.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard specifies the materials and dimensions of cast deck-end rollers.

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definition shall apply.

2.1 Chock — The body of the deck-end roller is known as chock.

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*Rules for rounding off numerical values (*revised*).

3. MATERIAL

3.1 The materials used for the construction of deck-end rollers shall be as given below:

Name of Part	*Material*	*Relevant Indian Standard*
Chock, horizontal roller and vertical roller	Grade 15 cast iron	IS : 210-1962[*]
	Cast steel	IS : 2985-1964[†] and IS : 1030-1962[‡]
Flat machine screw and bolt	Brass	IS : 291-1961[§] and IS : 4170-1967[‖]
Bush	Bronze	IS : 306-1968[¶]
Horizontal and vertical roller spindles	Steel	IS : 2073-1962[**]
Set screw	Steel	IS : 2517-1963[††]
Grease nipple	Brass	IS : 4009-1967[‡‡]
Locking plate for roller spindle	Steel	IS : 3747-1956[§§]

4. TYPES

4.1 Deck-end rollers shall be of the following three types:

Type A — Single roller left-handed,

Type B — Single roller right-handed, and

Type C — Double roller.

5. CONSTRUCTION

5.1 The construction of the three types of deck-end rollers shall be as shown in Fig. 1.

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[*] Specification for grey iron castings (*revised*).

[†] Specification for steel castings for ship's structure.

[‡] Specification for steel castings for general engineering purposes (*revised*).

[§] Specification for naval brass rods and sections (suitable for machining and forging) (*revised*).

[‖] Specification for brass rods for general engineering purposes.

[¶] Specification for tin bronze ingots and castings (*second revision*).

[**] Specification for carbon steel bars for production of machined parts for general engineering purposes.

[††] Specification for bright bars for threaded components.

[‡‡] Specification for grease nipples.

[§§] Specification for steel for flanging and pressing.

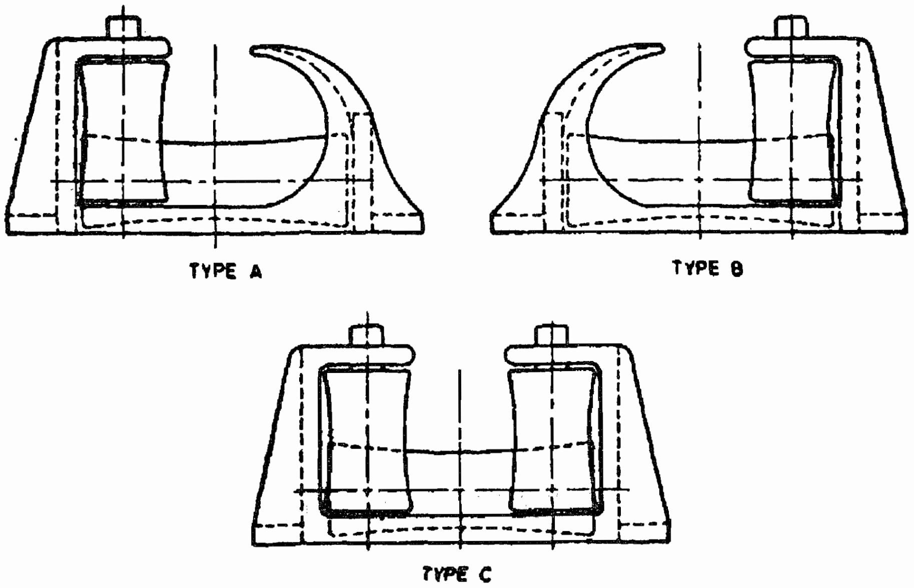

FIG. 1 TYPES OF CAST DECK-END ROLLERS

6. DIMENSIONS

6.1 The main dimensions for deck-end rollers shall be as shown in Fig. 2.

6.2 The detail dimensions for horizontal roller and spindle, and vertical roller, spindle, washer and locking plate for deck-end rollers shall be as shown in Fig. 3 and 4 respectively.

6.3 Type B shall be a mirror reflection of Type A.

6.4 Type C has two vertical rollers arranged symmetrically. The dimensions of the left-hand part of Type A from the centre line of chock, shall also apply to the right-hand part of Type C. The position of the horizontal roller shall be unchanged.

7. TOLERANCES

7.1 The tolerance on dimensions of cast iron duck-end rollers shall conform to IS : 5519-1970*.

7.2 The tolerance on dimensions of cast steel deck-end rollers shall conform to IS : 4897-1969†.

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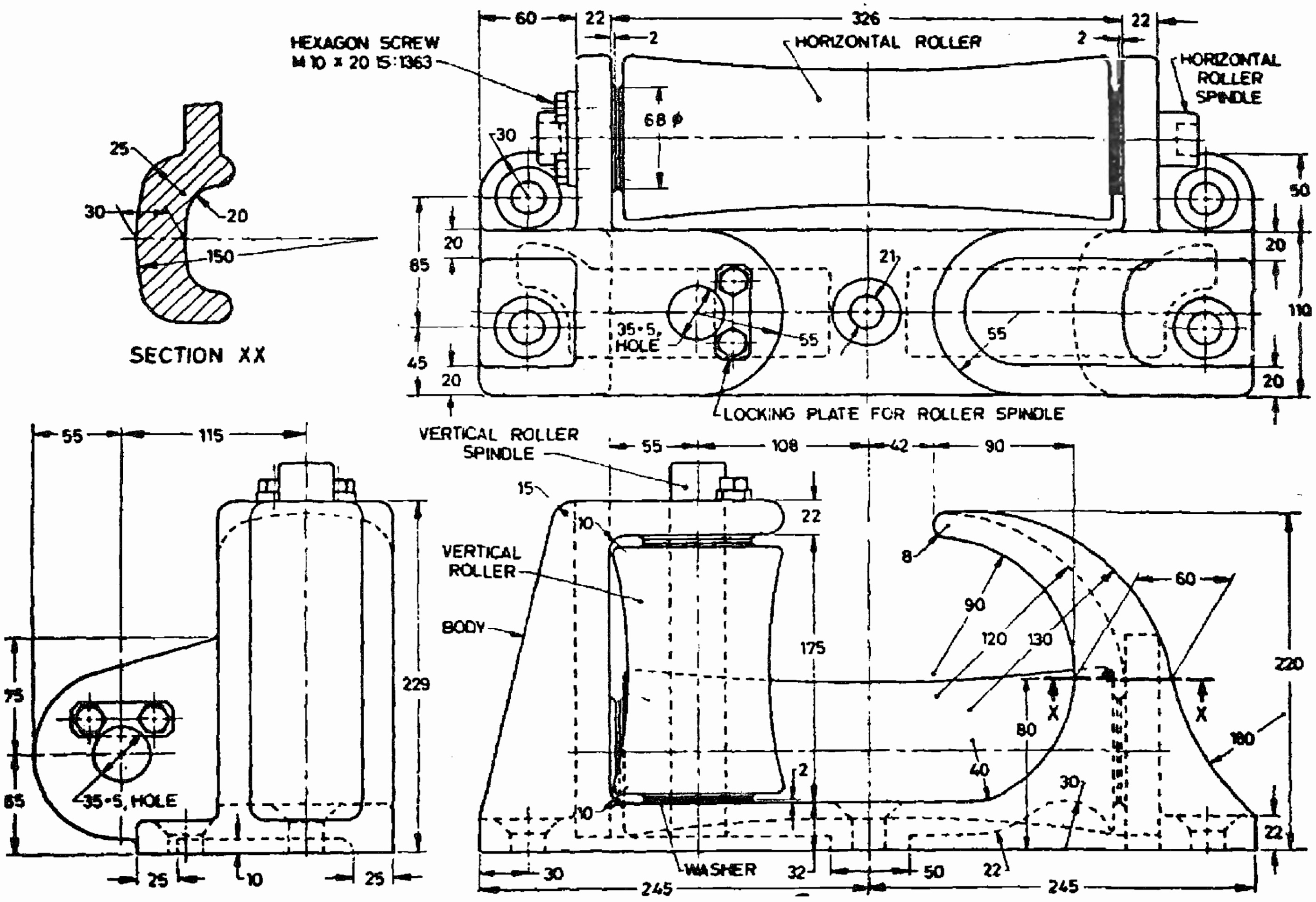
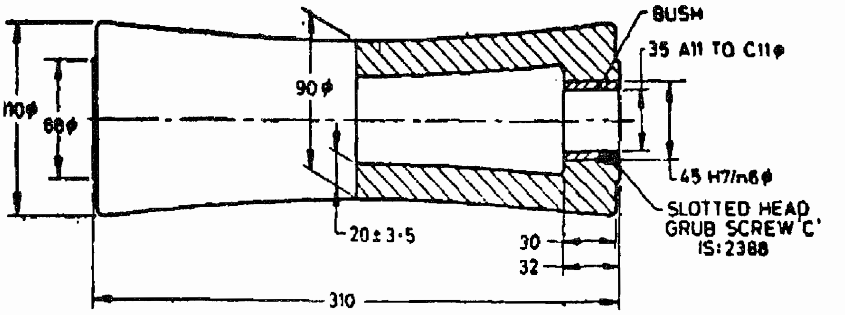
*Deviations for untoleranced dimensions of grey iron castings.

†Deviations for untoleranced dimensions and weight of steel castings.

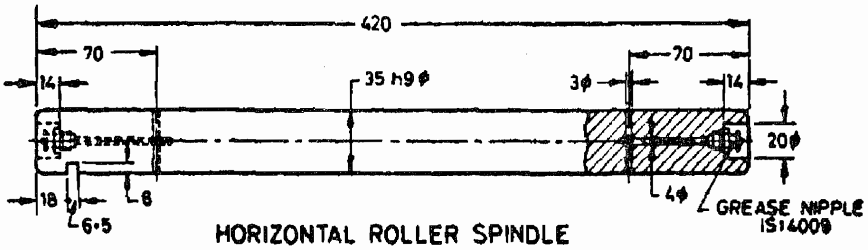


All dimensions in millimetres.

FIG. 2 DIMENSIONS FOR CAST DECK-END ROLLERS



HORIZONTAL ROLLER



HORIZONTAL ROLLER SPINDLE

All dimensions in millimetres.

FIG. 3 DIMENSIONS FOR HORIZONTAL ROLLER AND HORIZONTAL ROLLER SPINDLE FOR DECK-END ROLLERS

7.3 The tolerances on dimensions of machined parts, where they have not been specified in this standard, shall be according to medium grade specified in IS : 2102-1962*.

8. DESIGNATION

8.1 Deck-end rollers shall be designated by the name, type and number of the standard.

Example

Deck-end roller of Type A shall be designated as:

Deck-end Roller Type A IS : 5628

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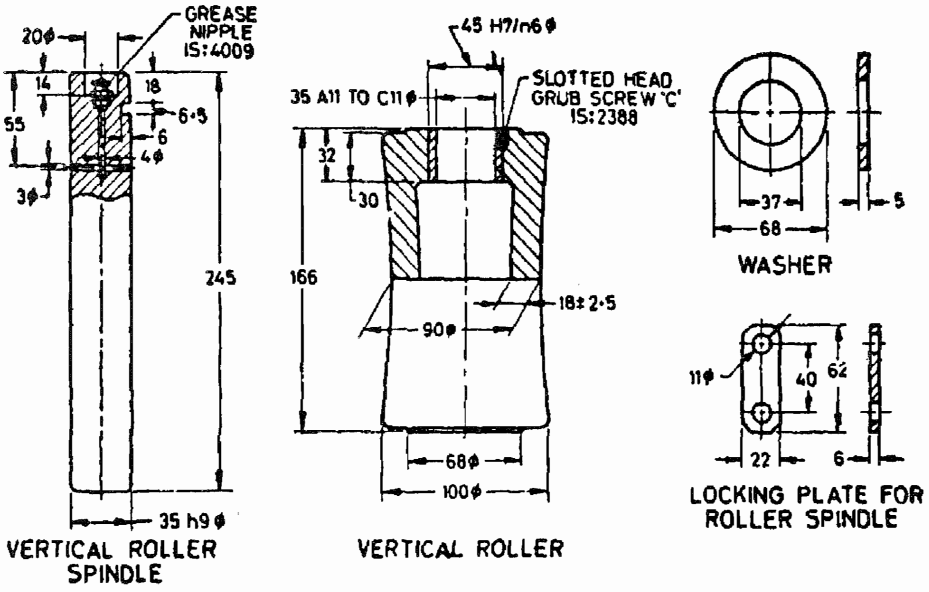
*Recommendations for machining deviations for dimensions without specified tolerances.



All dimensions in millimetres.

FIG. 4 DIMENSIONS FOR VERTICAL ROLLER SPINDLE, VERTICAL ROLLER, WASHER, AND LOCKING PLATE FOR DECK-END ROLLERS

9. WORKMANSHIP

9.1 Deck-end rollers shall be reasonably free from casting defects, such as blow holes.

9.2 The surface finish shall be 6.3 to 25 microns according to IS : 3073-1967*.

10. MARKING

10.1 Manufacturer's identification mark and number shall be marked on the base of the chock.

10.2 The cast deck-end rollers may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

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*Specification for assessment of surface roughness.

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